

Supplementary Data

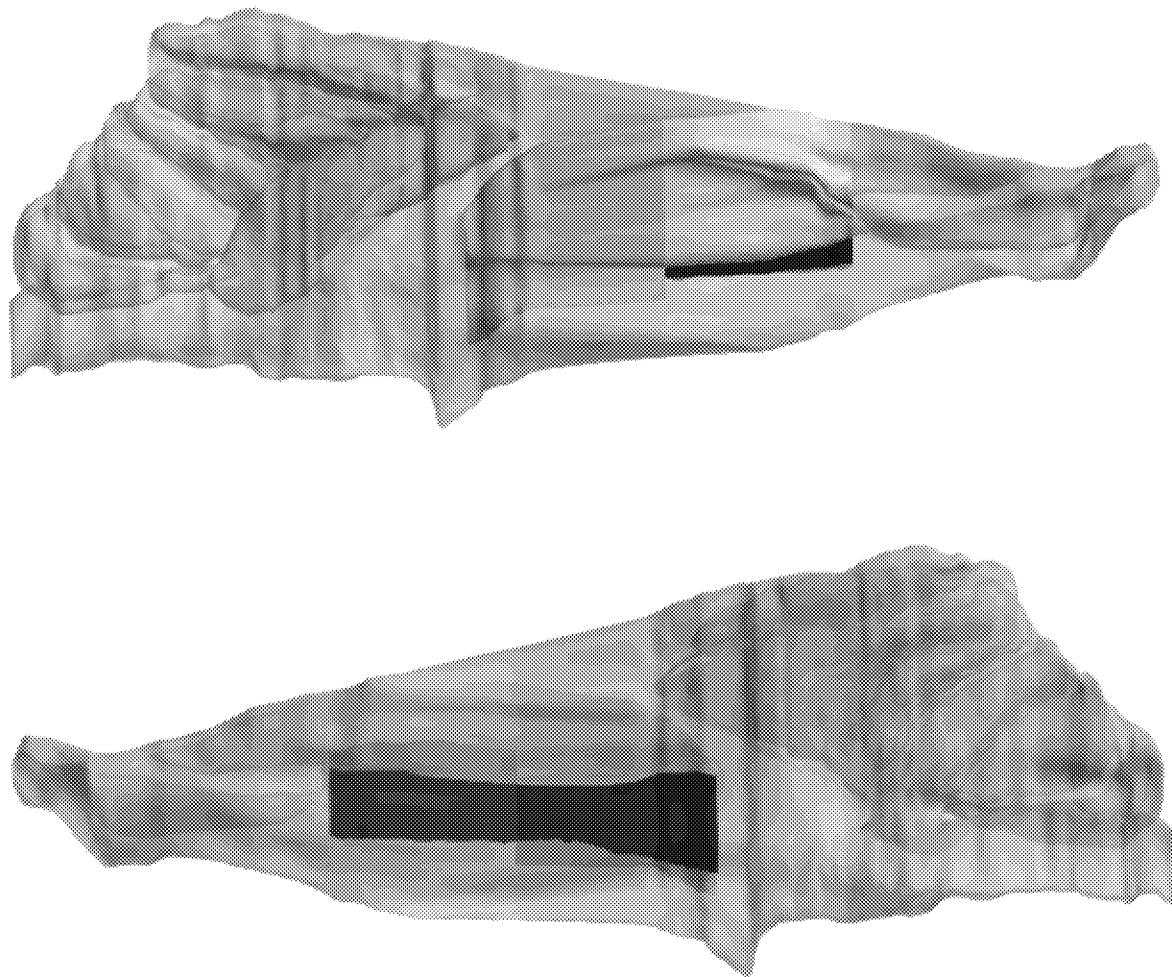


Figure S1: Lateral (top) and septal (bottom) views of the rat nasal CFD model displaying the regions where cell proliferation rates were measured: ALM (yellow), PLM (light blue), AMS (pink), PMS (purple), ADS (green), and MMT (dark blue). See text for abbreviation definitions.

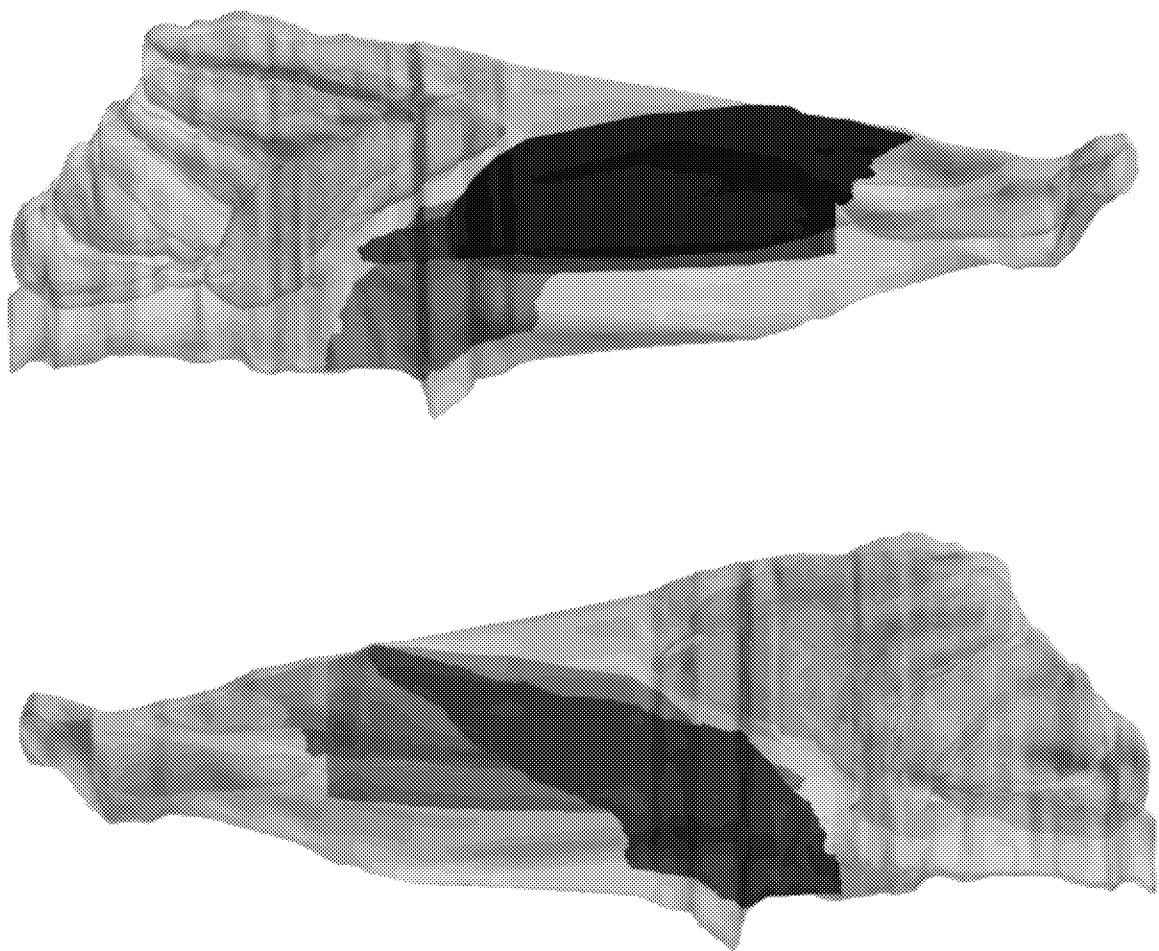


Figure S2: Lateral (top) and septal (bottom) views of the rat nasal CFD model displaying the regions where DPX were measured: high tumor region (blue), low tumor region (pink).

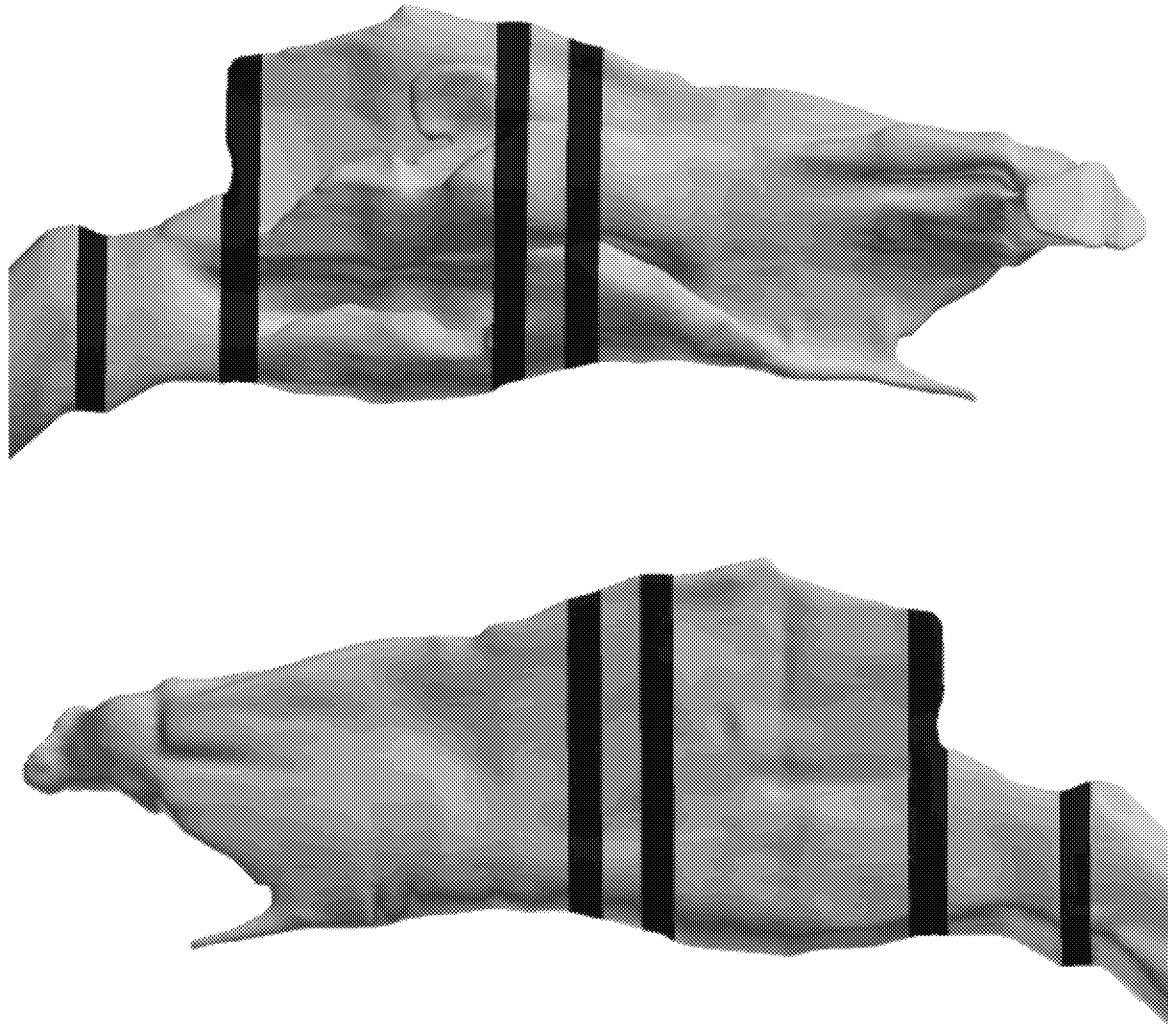


Figure S3: Lateral (top) and septal (bottom) views of the monkey nasal CFD model displaying the regions where cell proliferation rates were measured: Levels B-E are designated by the blue cross-sectional areas progressing from the anterior to posterior nose.

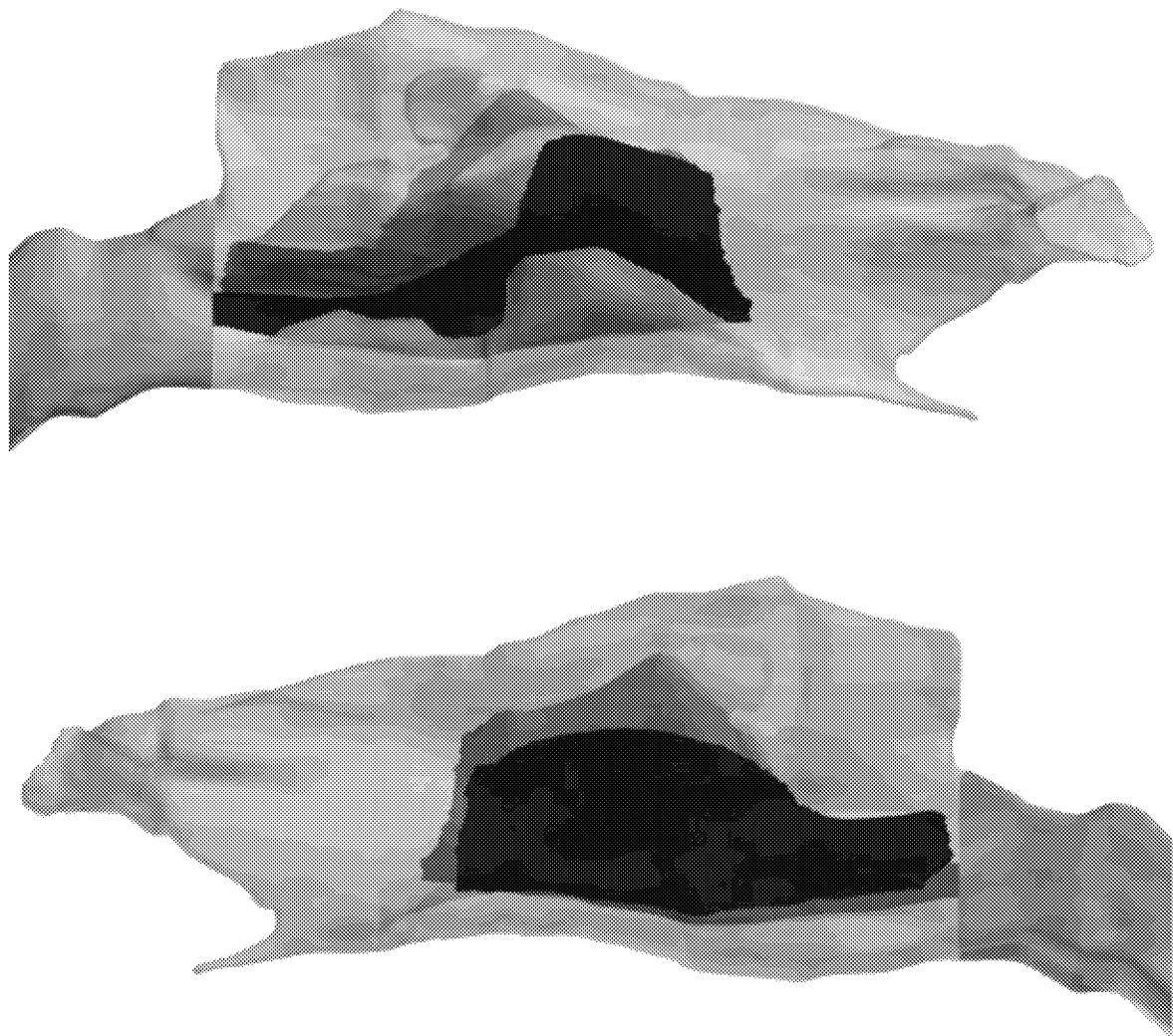


Figure S4: Lateral (top) and septal (bottom) views of the monkey nasal CFD model displaying the regions where DPX were measured: ALWS (blue), MT (pink), NP (green). See text for abbreviation definitions.

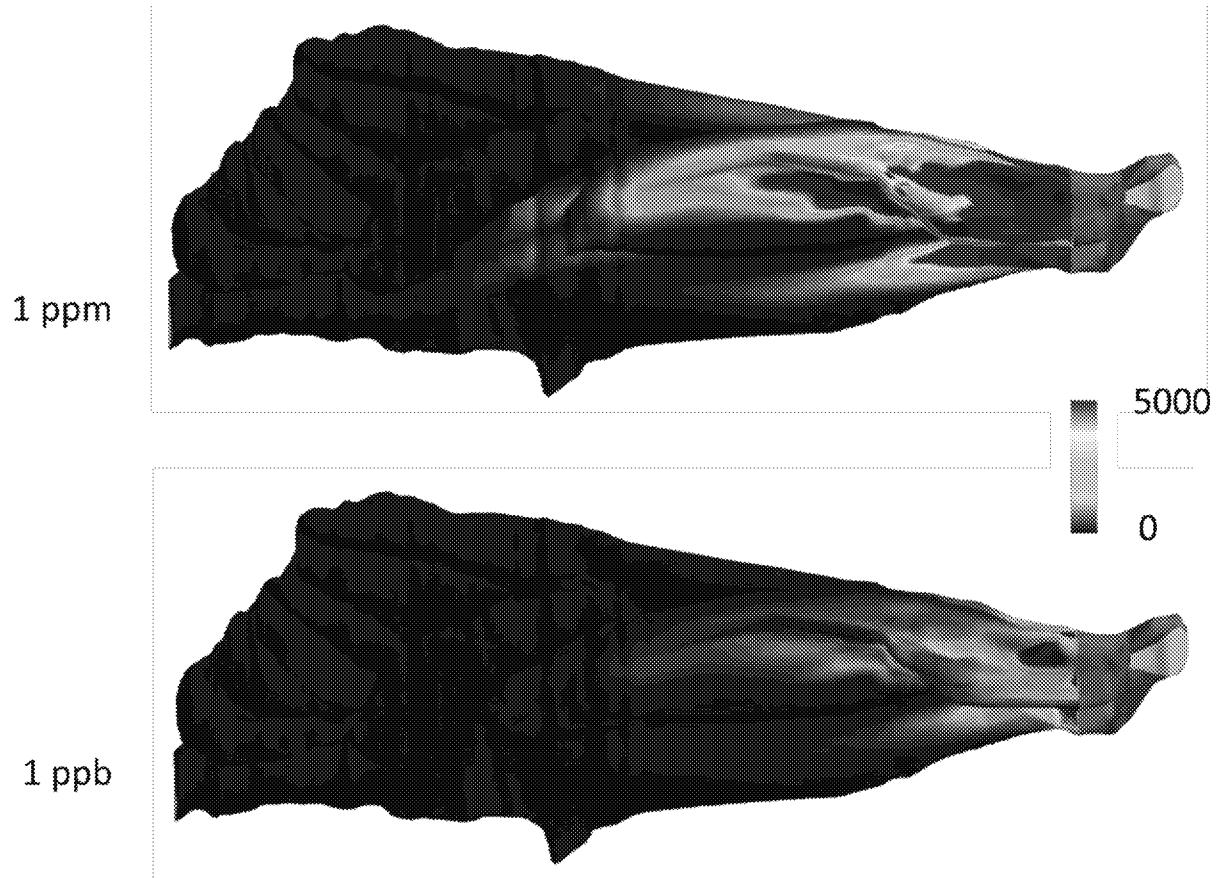


Figure S5: Wall mass flux contours of inhaled formaldehyde in the rat nasal CFD model at exposure concentrations of 1 ppm (top) and 1 ppb (bottom). Flux units are pmol/(mm²·hr·ppm).

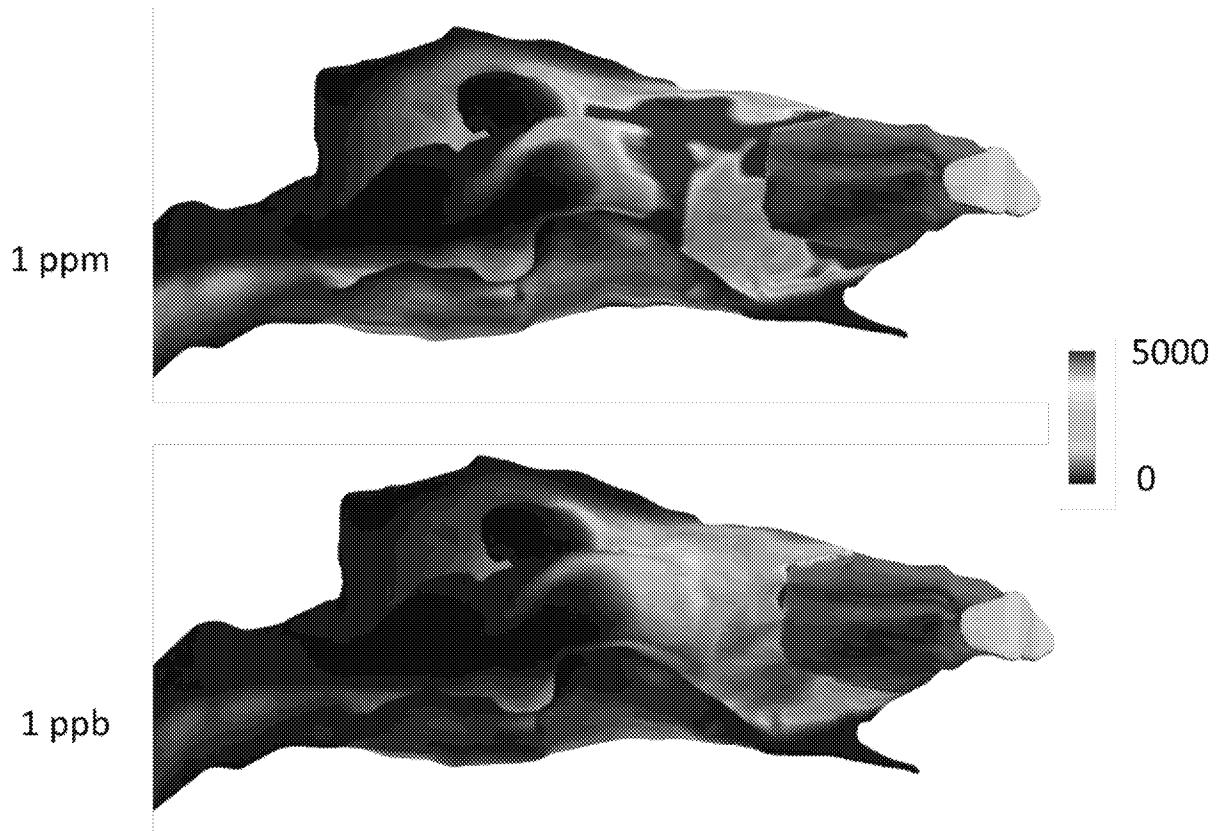


Figure S6: Wall mass flux contours of inhaled formaldehyde in the monkey nasal CFD model at exposure concentrations of 1 ppm (top) and 1 ppb (bottom). Flux units are pmol/(mm²-hr-ppm).

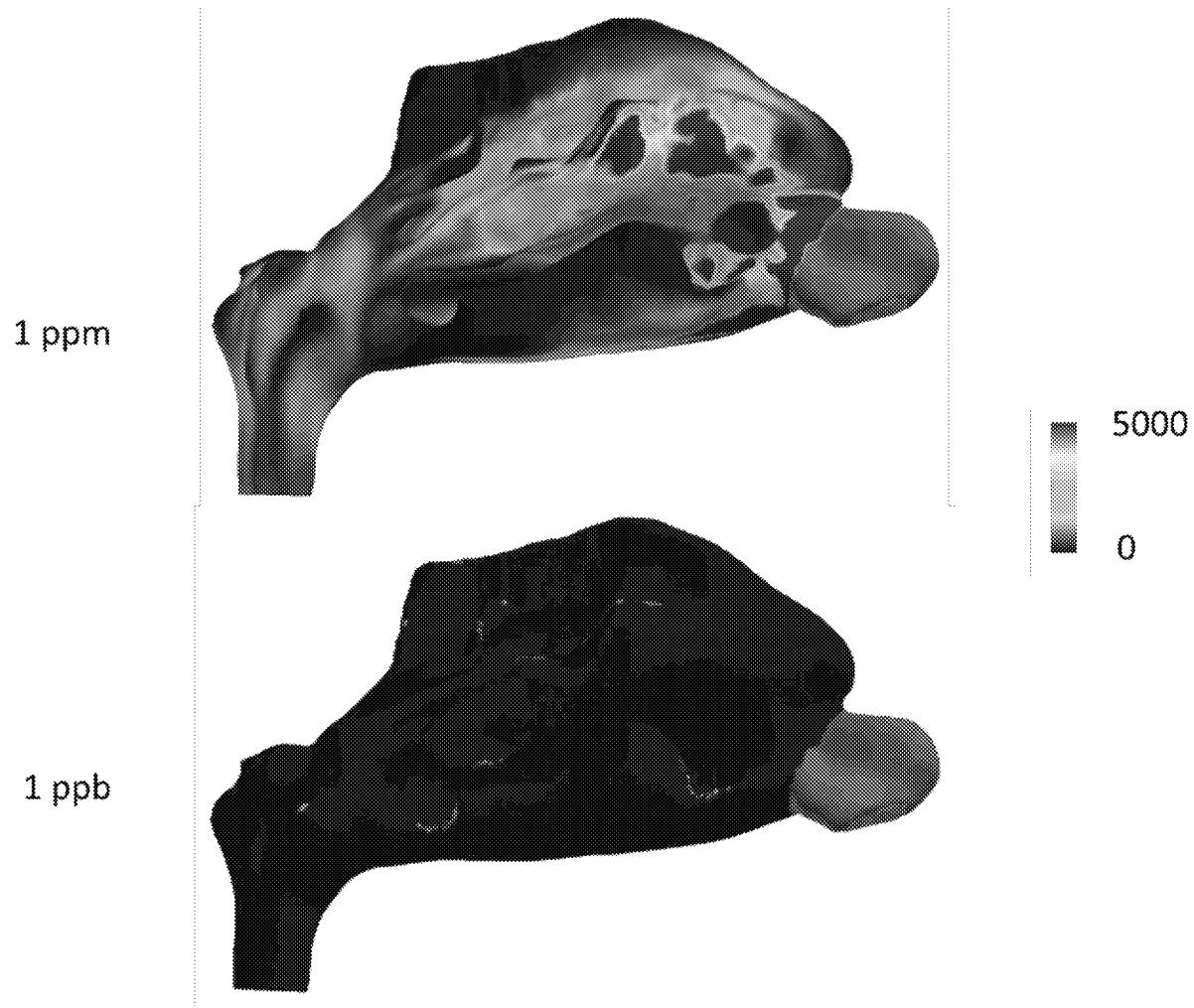


Figure S7: Wall mass flux contours of inhaled formaldehyde in the human nasal CFD model at exposure concentrations of 1 ppm (top) and 1 ppb (bottom). Flux units are pmol/(mm²·hr·ppm).

Table S1: Surface areas of the rat, monkey, and human nasal CFD models partitioned by predicted formaldehyde flux

	Rat		Monkey		Human	
Bin number	Average flux (pmol/mm ² -hr)	Surface area (mm ²)	Average flux (pmol/mm ² -hr)	Surface area (mm ²)	Average flux (pmol/mm ² -hr)	Surface area (mm ²)
1	226.7	1217.9	214.3	1442.5	182.8	6749.7
2	680.2	79.5	642.8	678.5	695.7	2764.6
3	1133.6	41.5	1071.3	522.6	1208.5	1926.3
4	1587.1	30.4	1499.8	719.2	1721.4	1384.4
5	2040.5	27.4	1928.3	866.4	2234.3	1170.7
6	2494.0	20.8	2356.8	610.6	2747.2	1044.5
7	2947.4	18.7	2785.3	384.9	3260.0	843.4
8	3400.8	15.0	3213.8	306.0	3772.9	653.1
9	3854.3	14.2	3642.4	237.5	4285.8	566.9
10	4307.7	12.2	4070.9	176.2	4798.6	432.8
11	4761.2	10.0	4499.4	133.6	5311.5	336.4
12	5214.6	8.9	4927.9	116.5	5824.4	264.8
13	5668.1	7.2	5356.4	93.0	6337.3	200.9
14	6121.5	6.0	5784.9	79.8	6850.1	142.0
15	6575.0	5.1	6213.4	69.3	7363.0	111.8

16	7028.4	4.3	6641.9	49.0	7875.9	92.6
17	7481.9	3.5	7070.4	32.5	8388.8	75.7
18	7935.3	3.3	7499.0	24.9	8901.6	53.8
19	8388.8	3.1	7927.5	13.0	9414.5	45.6
20	8842.2	3.4	8356.0	7.7	9927.4	39.7

Table S2: Surface area of the human nasal CFD model partitioned by predicted formaldehyde flux at exposure concentrations of 0.001, 0.01, and 0.1 ppm.

	0.001 ppm		0.01 ppm		0.1 ppm	
Bin number	Average flux (pmol/mm ² -hr)	Surface area (mm ²)	Average flux (pmol/mm ² -hr)	Surface area (mm ²)	Average flux (pmol/mm ² -hr)	Surface area (mm ²)
1	-96.6	0.2	-92.6	0.5	-52.1	0.1
2	-91.7	0.2	-83.1	0.7	2.8	5817.8
3	-86.7	0.2	-73.6	0.9	57.6	3300.1
4	-81.8	0.4	-64.0	0.9	112.4	2176.1
5	-76.8	0.3	-54.5	1.4	167.3	1509.6
6	-71.9	0.3	-45.0	2.0	222.1	1248.6
7	-66.9	0.4	-35.5	1.7	276.9	1104.9
8	-61.9	0.3	-25.9	1.9	331.7	863.5
9	-57.0	0.5	-16.4	4.8	386.6	676.2
10	-52.0	0.7	-6.9	17.7	441.4	562.0
11	-47.1	0.8	2.6	8918.4	496.2	421.9
12	-42.1	0.4	12.1	3660.8	551.0	321.6
13	-37.2	1.0	21.7	2307.6	605.9	253.5
14	-32.2	0.8	31.2	1562.7	660.7	171.0
15	-27.2	0.7	40.7	1030.5	715.5	129.2

16	-22.3	1.4	50.2	616.2	770.3	105.1
17	-17.3	2.2	59.7	350.2	825.2	85.3
18	-12.4	2.7	69.3	205.1	880.0	62.4
19	-7.4	6.5	78.8	130.6	934.8	48.5
20	-2.5	18879.7	88.3	85.3	989.6	42.2